

CLAIMS

1. A display device comprising a viewing window (18) or a screen, a housing (24), and means (12, 14) for producing an image on the screen, the device being characterized in that the housing is completely filled with silicone (20, 22).

2. A device according to claim 1, in which the screen or the window is disposed between a front bezel (34) and the housing (24), with at least one gasket (36, 38) being disposed between the bezel and the housing.

3. A device according to claim 1 or 2, in which the silicone situated behind the screen presents a refractive index that is identical or close to that of the material constituting the screen or the window.

4. A device according to any one of claim 3, in which the silicone situated behind the screen or the window is transparent in the visible range of the spectrum.

5. A device according to claim 4, in which the silicone situated immediately behind the screen or the window is a semi-liquid or gel or elastomer silicone.

6. A device according to claim 1, in which the housing is filled with a plurality of silicone compounds.

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7. A device according to claim 1, having an optical portion filled with a silicone in semi-liquid or elastomer or gel form, and an electronics portion filled with a liquid silicone.

8. A lighting device comprising a screen or a window (54), a housing (50), and means (52, 56) for producing electromagnetic radiation, the device being characterized in that the housing is completely filled with silicone (60).

9. A device according to claim 8, in which the silicone is liquid.

10. A camera comprising a viewing window (74), a housing (72), and means (70) for receiving radiation coming from outside the housing and passing through the window, the camera being characterized in that the housing is completely filled with silicone (88).

11. A camera according to claim 10, further comprising one or more motors (76, 78, 80) for controlling elements for adjusting the camera.

12. A camera according to claim 10 or 11, in which the silicone is liquid.

13. An optical device comprising a window (54, 74) or a viewing screen (18), a housing (24, 50, 72), an optical components (16, 52, 70) receiving radiation which

penetrates into the housing by passing through the window or the screen, or producing and emitting radiation which leaves the housing by passing through the window or the screen, the device being characterized in that the housing is completely filled with silicone (20, 22, 60, 88).

14. A device according to claim 13, in which the silicone situated behind the window or the screen presents a refractive index that is identical or close to that of the material constituting the window or the screen.

15. A device according to claim 13 or 14, in which the silicone situated behind the window or the screen is transparent in the visible range of the spectrum.

16. A device according to claim 13 or 14, in which the silicone situated immediately behind the window or the screen is a semi-liquid or gel or elastomer silicone.

17. A device according to claim 16, in which the housing is filled with a plurality of silicone compounds.

18. A device according to claim 13 or 14, comprising an optical portion filled with a silicone in semi-liquid or elastomer or gel form, and an electronics portion filled with a liquid silicone.

19. A method of filming a scene in which a camera is used according to claim 12.

20. A method of filming according to claim 19, in which a display device according to claim 8 is used connected to the camera and enabling the scene seen by the camera to be viewed.

21. A method of filming according to claim 20 in which the scene is lighted by means of a lighting device according to claim 8.

22. A method according to claim 19 or 21, in which filming takes place in an underwater environment.

23. A method of filming according to claim 22, in which filming takes place at a depth of more than 100 meters below the surface.

24. A method according to claim 19 or 21, in which filming takes place in a non-pressurized medium.

25. A method according to claim 24, in which filming takes place in the stratosphere or beyond.

26. A method of making an optical component comprising a window (54, 74) or a viewing screen (18), a housing (24, 50, 72), and optical components (16, 52, 70), the method comprising:

- evacuating the inside of the housing by pumping; and
- injecting at least one silicone compound into the housing.

27. A method of maintaining a device made according to claim 26, the method comprising:

- a step of draining the silicone;
- a maintenance or repair step;
- 5      • a step of evacuating the inside of the housing by pumping; and
- a step of injecting at least one silicone compound into the housing.

10       28. A method according to claim 26 or 27, further comprising a pumping step for degassing the silicone after it has been injected.

15       29. A method according to claim 26 or 27, further comprising a step of polymerizing the silicone after it has been injected.

20       30. A method according to claim 26 or 27 comprising injecting a plurality of silicone compounds into the housing.